

# RICK **Born Newrro Product**

## Robot Intelligent Controller Kit Series

### Newric

#### AI & IOT compatible Controller

**Product Name:** Newric AI & IOT compatible Robotics Controller

**Category:** Advance Controller for Lab, Education and Research

**Platform:** Microcontroller Based(ESP32)

**Ideal For:** Engineering Colleges, Students, Research Labs, Robotics Educators, and Developers, AI and IOT Research Labs and trainings.



#### **Mechanical Specifications:**

- **Dimensions:** Approx. 350mm × 280mm × 200mm
- **Weight:** ~1 kg (including battery and sensors)

#### **Power System:**

- **Battery:** 12V 5000mAh Li-ion with BMS protection
- **Charging:** charger included with charging indicator
- **Run Time:** Based on usage
- **Protection:** Short-circuit, Thermal protection and Revers polarity
- **Includes:** 12V 5A Each 4 Channel Motor Driver with Encoder Compatibility , 5V 4A USB Output ,Mic and Speake , Battery indicator , Mic and Speaker.

#### **Computing Unit:**

- **Dual Controller:** ESP32 and Raspberry Pi Pico
- **Motor Driver:** 7V to 24V 6A/per Channel Motor Driver
- **Connectivity:** Wi-Fi, Bluetooth
- **Memory:** Standard 8Gb and extendable
- **Expansion Board:** USB, GPIO, I2C, UART, SPI
- **Compatible SBCs and other Microcontrollers:**
  - Jetson series
  - Raspberry Pi series
  - Others

# Born Newrro Products

Quick view Specification Sheet

## ✓ Included Accessories:

- Newric unit (fully assembled)
- Pre-flashed Firmware (based on version)
- 12v 5000mAh Battery and fast charger
- User guide and setup documentation
- Curriculum access (with purchase)
- Access to project development videos

## Academic & Research Use:

### Coursework & Laboratory

Hands-on modules in robotics, IoT, and embedded systems with labs on motor control, PID tuning, and sensor integration. Includes experiments on networking protocols like MQTT, HTTP, BLE, and Wi-Fi.

### Research Focus

Covers advanced topics such as sensor fusion, trajectory planning, and obstacle avoidance. Integrates AI/ML for TinyML inference, edge analytics, cloud learning, and vision-based intelligence. Includes studies on secure IoT communication and OTA updates.

### Capstone & Innovation Projects

Projects in autonomous delivery, warehouse logistics, smart agriculture, disaster response, healthcare robotics, swarm systems, and AI-enabled service robots with voice, vision, and analytics.

### Learning Outcomes

Develop expertise in system integration, control algorithms, and cloud connectivity. Apply robotics, IoT, and AI to real-world challenges and edge AI applications, fostering innovation for research and industry.

## Warranty & Support:

- **Warranty:** 6 months (sealed unit condition)
- **Support:** Online & offline assistance, 48-hour resolution
- **AI assistant:** 24/7 access to guide and help u with robotics
- **Documentation:** Full technical manual and learning modules included

# Born Newrro Products

Quick view Specification Sheet

## **Additional add on Sensor Suite:** customisable

- Flame Sensor
- Ultrasonic sensor
- HeartRate sensor
- Motion Sensor
- IR Sensor
- Smoke Detection sensor
- DHT11
- Rain Sensor
- Soil Moisture Sensor
- Relay
- Potentiometer
- RGB LED
- DS18B20 Sensor
- LDR
- RFID Sensor
- Touch Sensor
- Buzzer
- I2C Display
- 4 channel Motor Driver(In Built)
- IMU (In Built)

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## **Add on Additional Actuators:** customisable

- 12V Water Pump
- Vibration Motor
- Solenoid Lock
- Metal Gear Servo Motor

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## **Software & OS:**

- **Programming Languages:** Micro Python and Arduino
- **IDE Support:** Arduino IDE, VS Code, Thonny IDE

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## **Web Interface:**

- **Cloud Integration:**
  - Blynk IoT Platform
  - ThinkSpeak
  - ThingsBoard
  - Adafruit IO
  - Firebase (by Google)
- **Access:** Browser-based (via local IP)

# Contact Us



## Newrro Tech LLP

### Key Post Service

#### Customer Support Assistance

- Dedicated online and offline support for students, educators, and institutions using Newrro products and kits.

#### AI Agent Assistance

- Instant 24x7 technical guidance with our AI-powered chatbot—available via the Newrro website for setup help, troubleshooting, and quick answers.

#### Quick Resolution Service

- Our support team responds to queries within 48 working hours to ensure minimal disruption to your learning or lab activities.

#### Comprehensive Warranty

- All robots and controllers include a 6-month warranty when seals and usage guidelines are maintained.

#### Detailed Documentation

- All kits come with user manuals and setup guides designed for ease of use and quick deployment in academic environments.

#### Onboarding & Training

- Personalized training modules are available to help institutions and educators integrate Newrro solutions into classrooms and labs effectively.

### We are trusted by



Bengaluru, India



GLOBAL ACADEMY OF TECHNOLOGY  
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